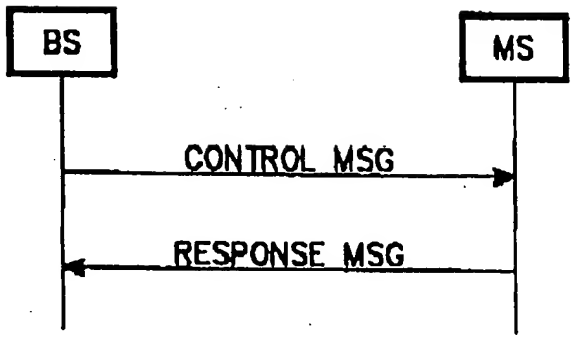


FIG. 1
(PRIOR ART)

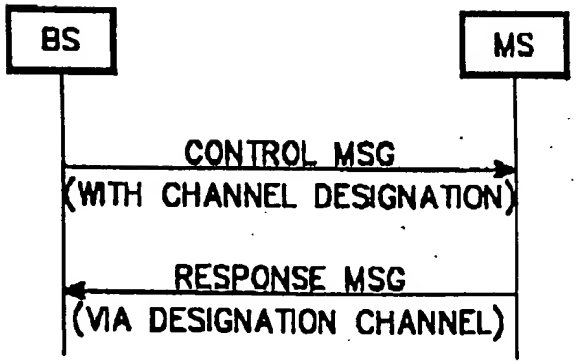


FIG. 2
(PRIOR ART)

CONTROL MESSAGE
DESIGNATION ON/OFF
CHANNEL NUMBER
BIT RATE

FIG. 3

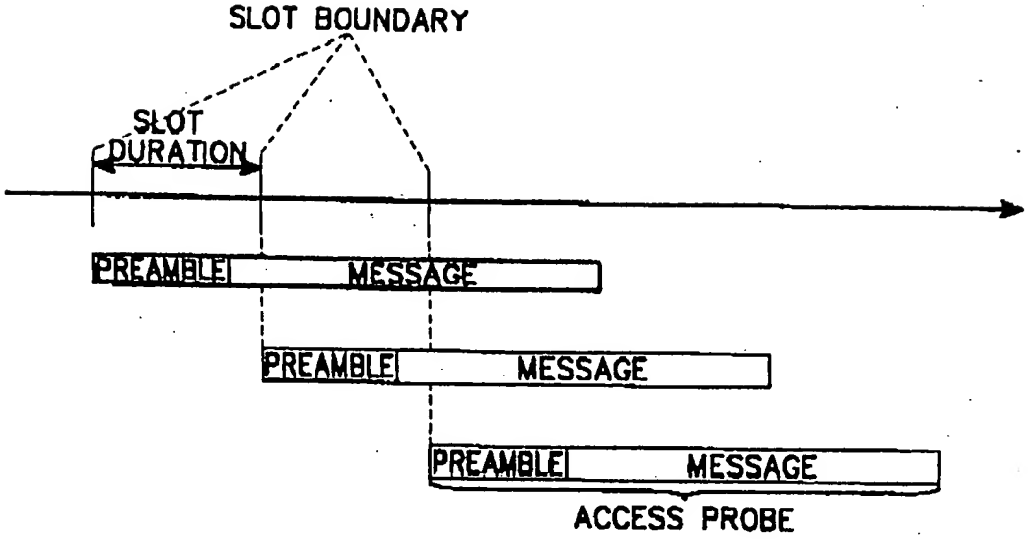

SLOT BOUNDARY
SLOT DURATION
PREAMBLE
MESSAGE
PREAMBLE
MESSAGE
PREAMBLE
MESSAGE
ACCESS PROBE

FIG. 4

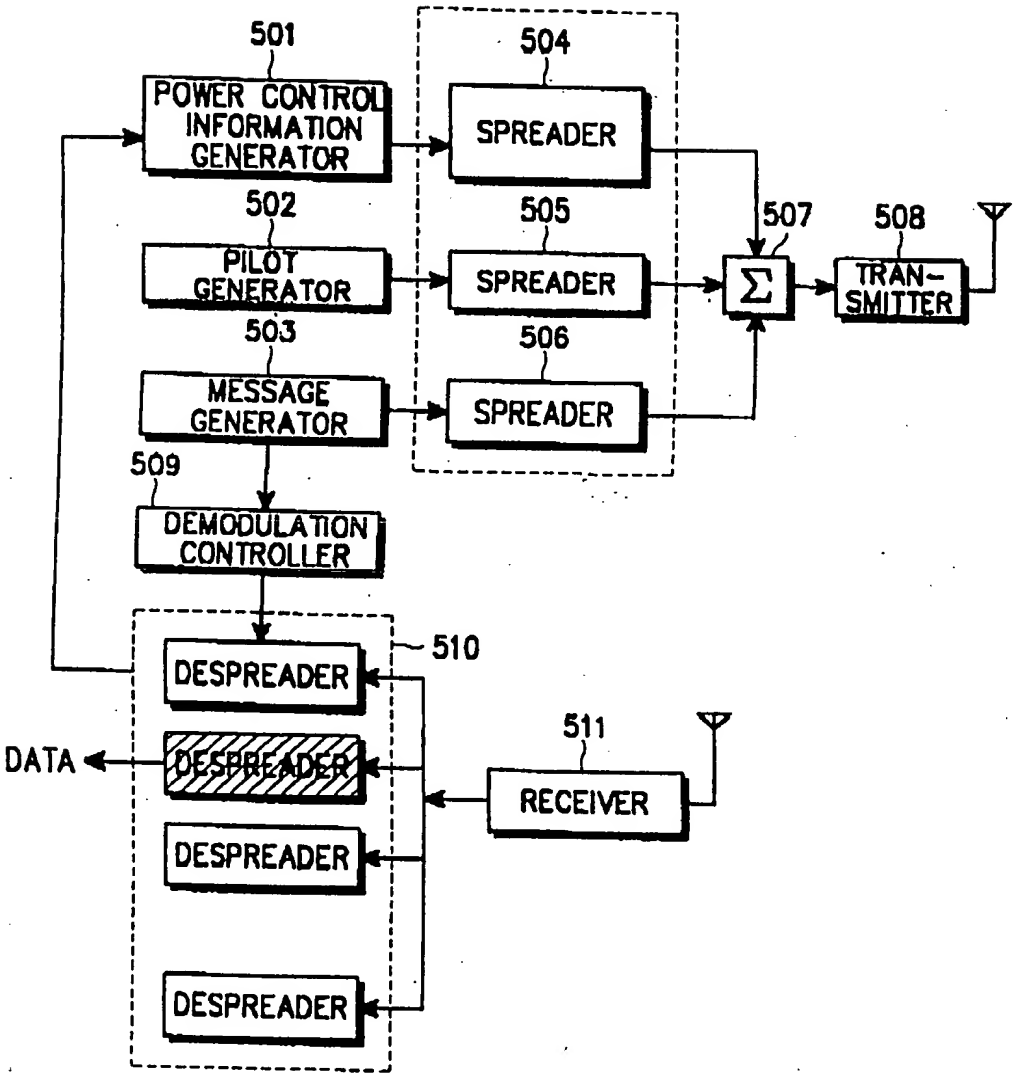
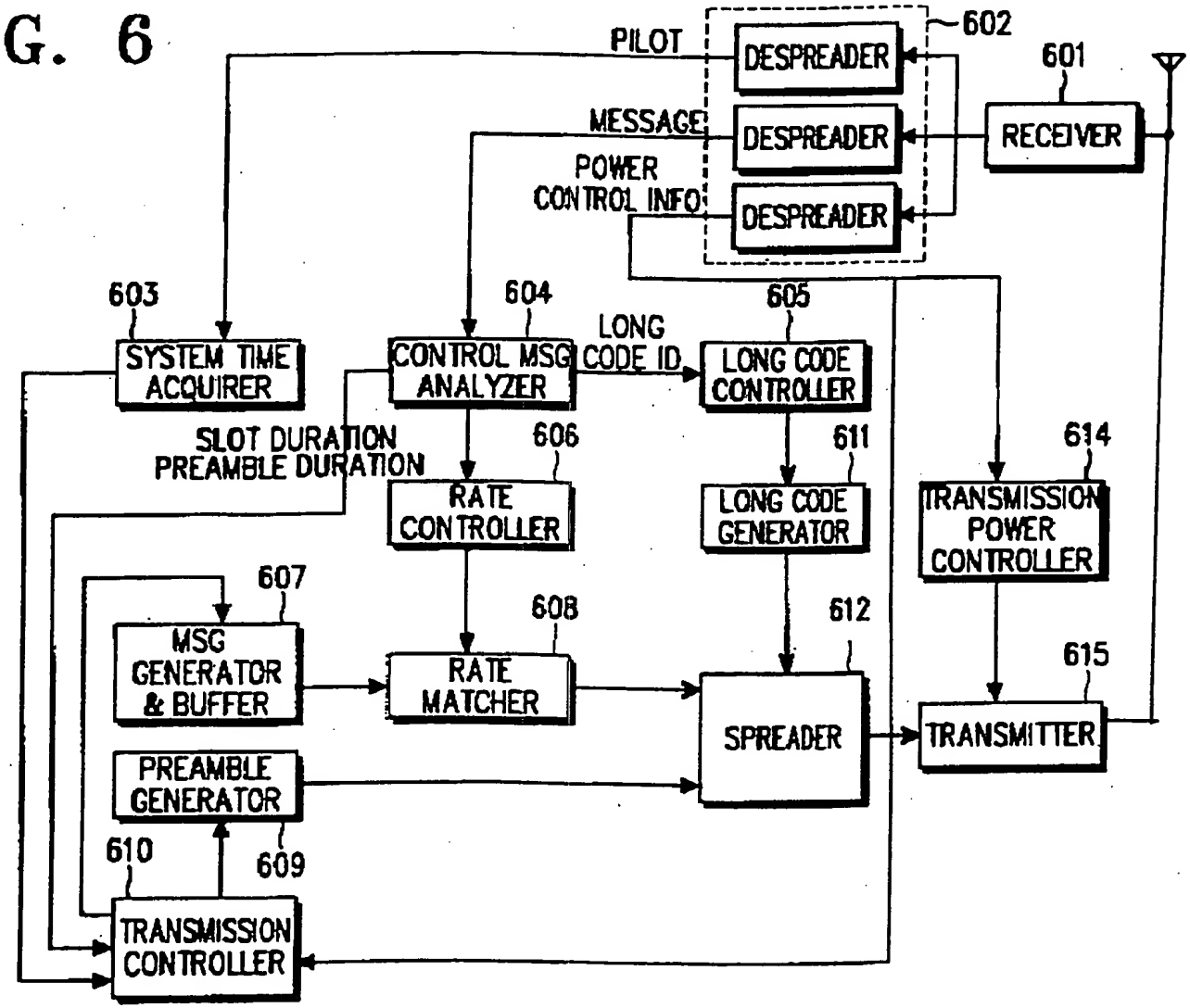

501
POWER CONTROL INFORMATION GENERATOR
502
PILOT GENERATOR
503
MESSAGE GENERATOR
509
DEMODULATION CONTROLLER
504
SPREADER
505
SPREADER
506
SPREADER
507
Σ
508
TRAN-SMITTER
510
DESPREADER
DESPREADER
DESPREADER
DESPREADER
DATA
511
RECEIVER

FIG. 5

FIG. 6


602
PILOT
DESPREADER
601
MESSAGE
DESPREADER
RECEIVER
POWER CONTROL INFO
DESPREADER
603
604
605
LONG CODE ID
SYSTEM TIME ACQUIRER
CONTROL MSG ANALYZER
LONG CODE CONTROLLER
SLOT DURATION
PREAMBLE DURATION
606
611
614
RATE CONTROLLER
LONG CODE GENERATOR
TRANSMISSION POWER CONTROLLER
607
608
612
615
MSG GENERATOR & BUFFER
RATE MATCHER
SPREADER
TRANSMITTER
PREAMBLE GENERATOR
610
609
TRANSMISSION CONTROLLER

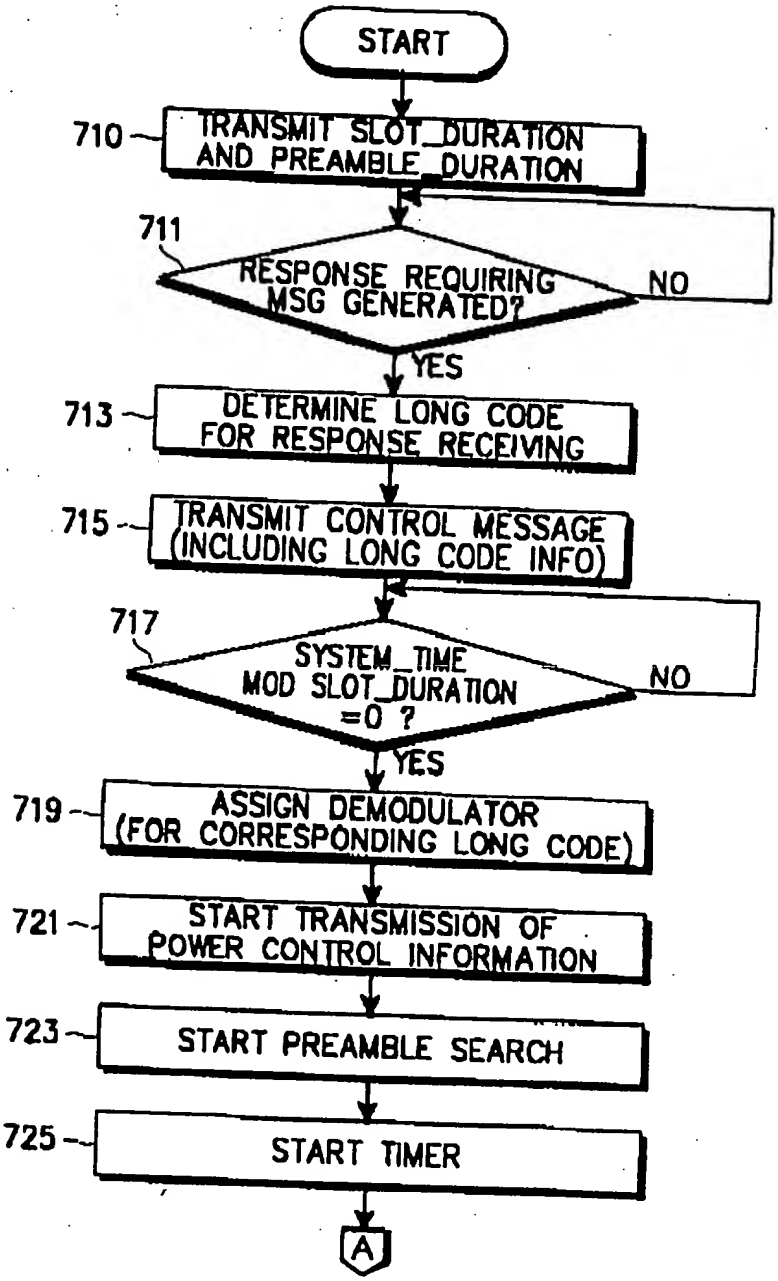

START
710
TRANSMIT SLOT_DURATION AND PREAMBLE_DURATION
711
RESPONSE REQUIRING MSG GENERATED?
NO
YES
713
DETERMINE LONG CODE FOR RESPONSE RECEIVING
715
TRANSMIT CONTROL MESSAGE (INCLUDING LONG CODE INFO)
717
SYSTEM_TIME MOD SLOT_DURATION =0 ?
NO
YES
719
ASSIGN DEMODULATOR (FOR CORRESPONDING LONG CODE)
721
START TRANSMISSION OF POWER CONTROL INFORMATION
723
START PREAMBLE SEARCH
725
START TIMER
A

FIG. 7A

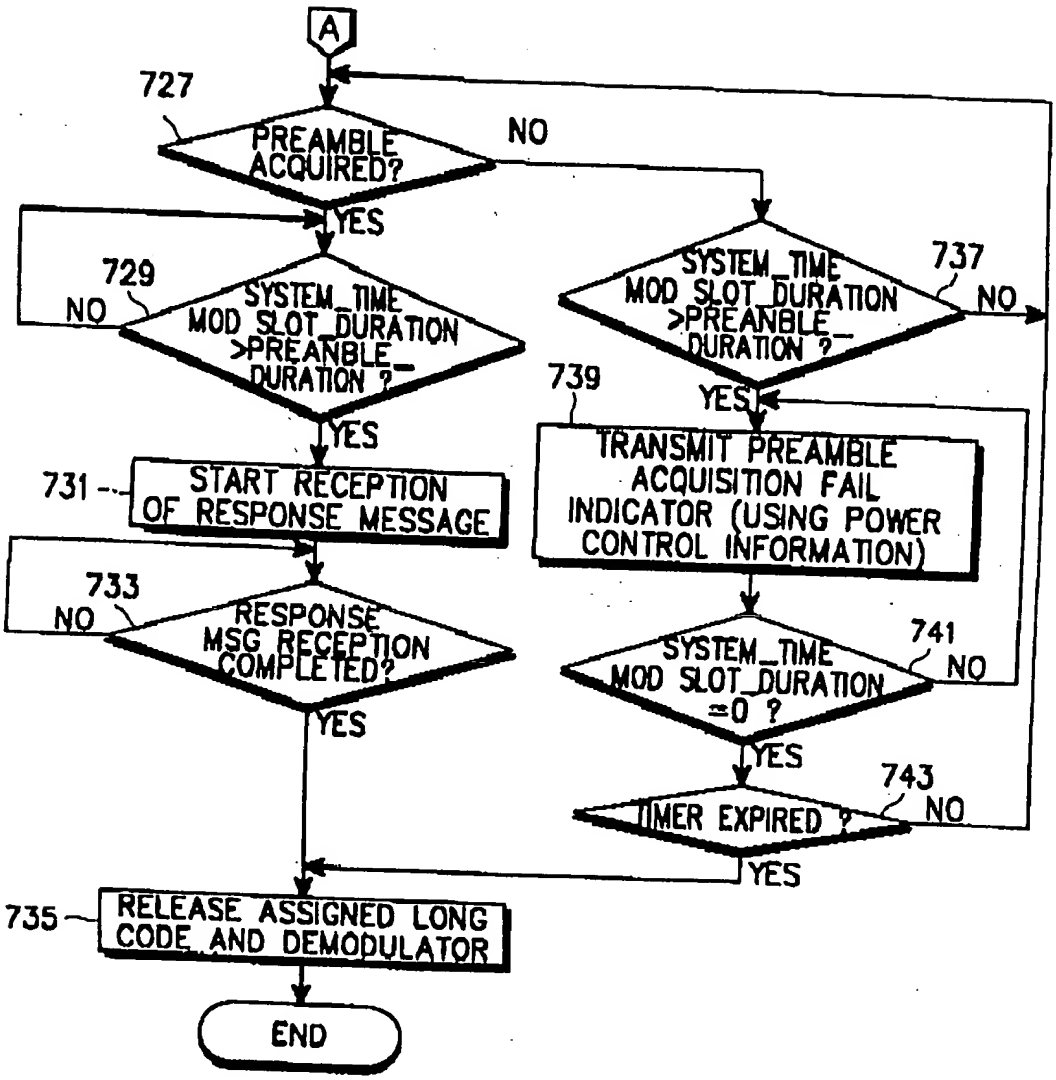

A
727
PREAMBLE ACQUIRED?
NO
YES
729
NO
SYSTEM_TIME MOD SLOT_DURATION >PREAMBLE_DURATION ?
YES
731
START RECEPTION OF RESPONSE MESSAGE
733
NO
RESPONSE MSG RECEPTION COMPLETED?
YES
735
RELEASE ASSIGNED LONG CODE AND DEMODULATOR
END
737
SYSTEM_TIME MOD SLOT_DURATION >PREAMBLE_DURATION ?
NO
YES
739
TRANSMIT PREAMBLE ACQUISITION FAIL INDICATOR (USING POWER CONTROL INFORMATION)
741
SYSTEM_TIME MOD SLOT_DURATION =0 ?
NO
YES
743
TIMER EXPIRED ?
NO
YES

FIG. 7B

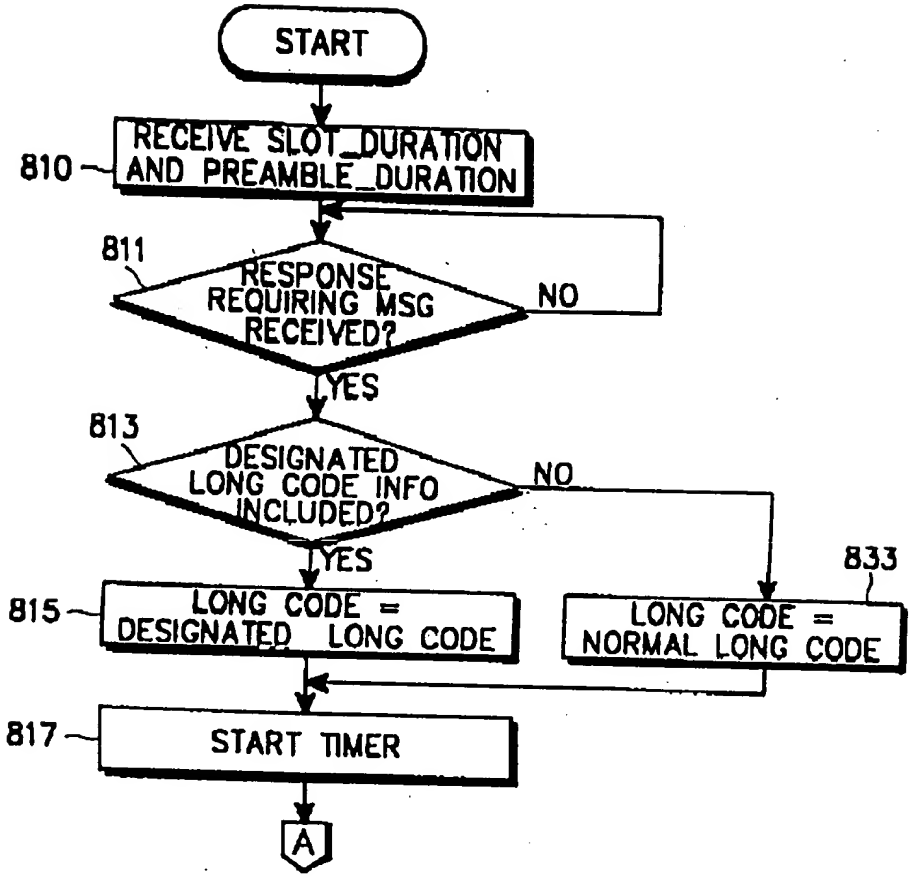

START
RECEIVE SLOT_DURATION AND PREAMBLE_DURATION
810
811
RESPONSE REQUIRING MSG RECEIVED?
NO
YES
813
DESIGNATED LONG CODE INFO INCLUDED?
NO
YES
833
815
LONG CODE = DESIGNATED LONG CODE
LONG CODE = NORMAL LONG CODE
817
START TIMER
A

FIG. 8A

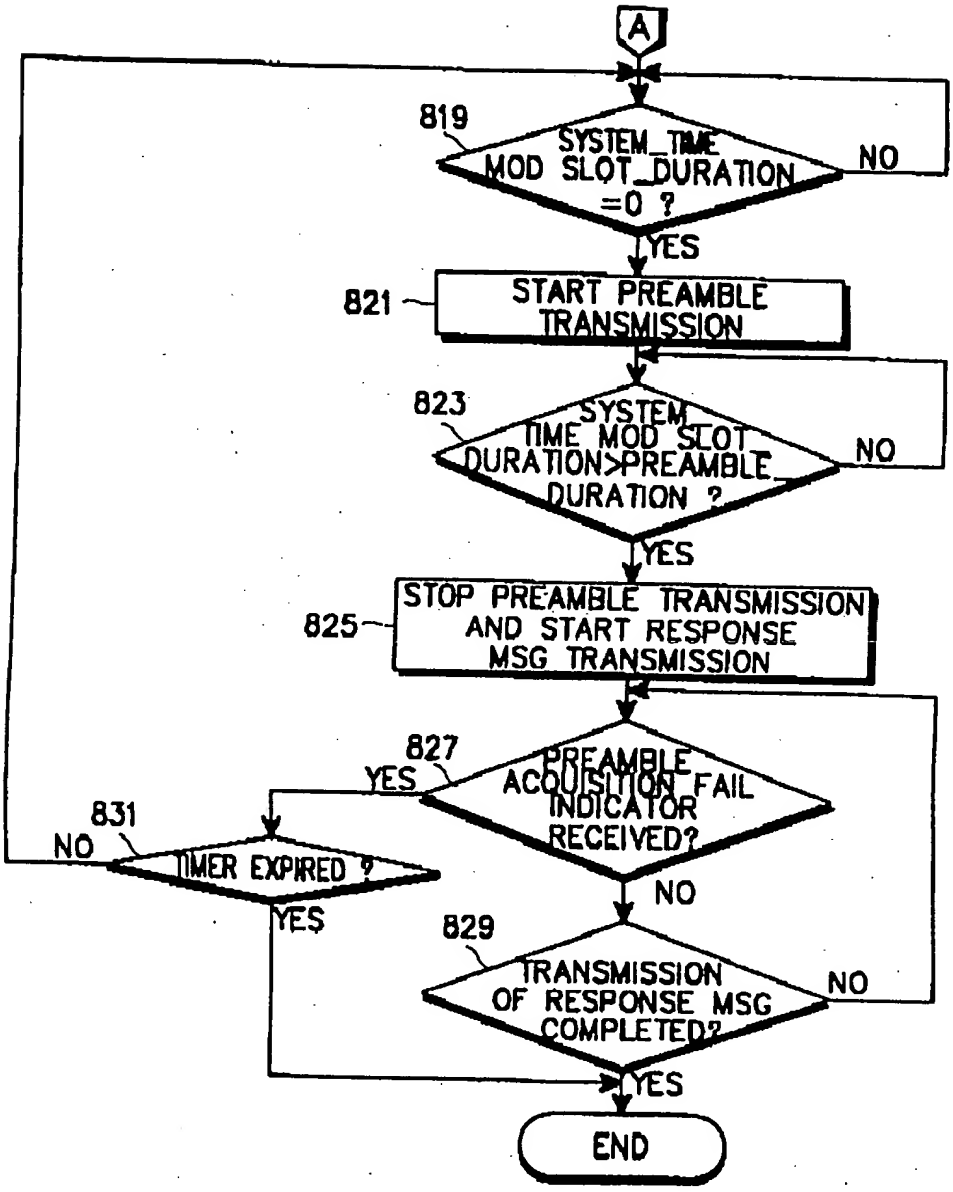

A
819
SYSTEM_TIME MOD SLOT_DURATION =0 ?
NO
YES
821
START PREAMBLE TRANSMISSION
823
SYSTEM TIME MOD SLOT DURATION>PREAMBLE DURATION ?
NO
YES
825
STOP PREAMBLE TRANSMISSION AND START RESPONSE MSG TRANSMISSION
827
PREAMBLE ACQUISITION FAIL INDICATOR RECEIVED?
YES
NO
831
TIMER EXPIRED ?
NO
YES
829
TRANSMISSION OF RESPONSE MSG COMPLETED?
NO
YES
END

FIG. 8B